

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): An implantable microfabricated sensing device capable of being entirely implanted within a human body ~~sensor device~~ for measuring a physiologic parameter of said human body, said sensing device comprising a biocompatible monolithic structure ~~interest within a patient~~, said sensor comprising:

a substrate;

a sensor integrally microfabricated ~~formed~~ with said substrate and being responsive to the physiologic parameter; ~~the sensor having a fixed electrode and a moveable electrode wherein the sensor is configured to sense a capacitance corresponding to a physiologic parameter~~,

~~at least one conductive path~~ paths integrally formed with said substrate and said sensor; and

active circuitry microfabricated in ~~close~~ proximity to said sensor and electrically connected to said sensor by said conductive path.

Claim 2 (canceled)

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Claim 3 (currently amended): The sensing ~~sensor~~ device of claim 30 ~~claim 1~~ wherein said fixed electrode is formed as a conductive layer on said substrate.

3
Claim 4 (currently amended): The sensing ~~sensor~~ device of claim 1 wherein said sensor comprises is at least partially formed of a cap layer on said substrate.

4
Claim 5 (currently amended): The sensing ~~sensor~~ device of claim 4 wherein said cap layer includes portions defining a diaphragm of said sensor.

5
Claim 6 (currently amended): The sensing ~~sensor~~ device of claim 4 wherein said active circuitry is integrally fabricated in said substrate ~~with said sensor~~.

6
Claim 7 (currently amended): The sensing ~~sensor~~ device of claim 4 wherein said cap layer is formed of monocrystalline silicon.

7
Claim 8 (currently amended): The sensing ~~sensor~~ device of claim 4 wherein said cap layer is boron doped silicon.

8
Claim 9 (currently amended): The sensing ~~sensor~~ device of claim 30 ~~claim 1~~ wherein said fixed and moveable electrodes define an interior volume therebetween and a

surface cavity in portion of said substrate defines ~~define~~ a displacement cavity in communication with said interior volume.

9 *35*
Claim 10 (currently amended): The sensing ~~sensor~~ device of claim 36 ~~claim 1~~ wherein said fixed electrode includes a main electrode and at least one reference electrode.

10
Claim 11 (currently amended) The sensing ~~sensor~~ device of claim 1 wherein said sensing device is entirely implanted within said human body and is operating to measure the physiologic parameter within said human body. ~~monolithic~~

11
Claim 12 (currently amended): The sensing ~~sensor~~ device of claim 1 further comprising a cap layer formed over said substrate.

12 *11*
Claim 13 (currently amended): The sensing ~~sensor~~ device of claim 12 wherein said cap layer includes a portion defining a moveable electrode of said sensor.

13 *11*
Claim 14 (currently amended): The sensing ~~sensor~~ device of claim 12 wherein said cap layer is conductive.

14 *11*
Claim 15 (currently amended): The sensing ~~sensor~~ device of claim 12 wherein

said cap layer is doped silicon.

15
Claim ~~16~~ (currently amended): The sensing -sensor- device of claim 1 wherein
said sensor is a pressure sensor.

16
Claim ~~17~~ (currently amended): The sensing -sensor- device of claim 1 wherein
said sensor is a temperature sensor.

17
Claim ~~18~~ (currently amended): The sensing -sensor- device of claim 1 wherein
said sensor is a chemical sensor.

18
Claim ~~19~~ (currently amended): The sensing -sensor- device of claim 1 further
comprising a cap layer bonded to said substrate, said active circuitry being integrally formed
in said cap layer, wherein said active circuitry is integrally formed within a cap layer over
said substrate.

19
Claim ~~20~~ (currently amended): The sensing -sensor- device of claim 1 wherein
said active circuitry is integrally formed in said substrate, with said substrate.

20
Claim ~~21~~ (currently amended): The sensing -sensor- device of claim 1 wherein

said active circuitry is mounted to said substrate.

21 20
Claim 22 (currently amended): The sensing -sensor device of claim 21 wherein
said active circuitry is received within a recess defined in said substrate.

22
Claim 23 (currently amended): The sensing -sensor device of claim 1 further
comprising at least two sensors.

23 22
Claim 24 (currently amended): The sensing -sensor device of claim 23 wherein
said two sensors sense the same physiologic parameter.

24 22
Claim 25 (currently amended): The sensing -sensor device of claim 23 wherein
said two sensors sense different physiologic parameters.

25
Claim 26 (currently amended): The sensing -sensor device of claim 1 wherein
said sensor is a capacitive sensor having a fixed electrode and a moveable electrode, said
fixed and moveable electrodes being electrically coupled by first and second conductive paths
to said active circuitry, said first and second paths being electrically isolated from one
another.

26 *25*
Claim *21* (currently amended): The sensing -sensor device of claim *26* wherein
said paths are isolated by a dielectric layer therebetween.

27 *25*
Claim *28* (currently amended): The sensing -sensor device of claim *26* wherein
said paths are isolated by a p-n junction structure.

28 *25*
Claim *29* (currently amended): The sensing -sensor device of claim *26* wherein
said sensor operates in a proximity mode whereby the fixed electrode and the moveable
electrode do not contact each other when responding to the physiologic parameter.

29 *25*
Claim *30* (currently amended): The sensing -sensor device of claim *26* wherein
said sensor operates in a touch mode whereby the fixed electrode and the moveable electrode
progressively contact each other when responding to the physiologic parameter.

30
Claim *31* (currently amended): The sensing -sensor device of claim 1 further
comprising a bioinert coating over a majority of exterior surfaces of said sensor.

31
Claim *32* (currently amended): The sensing -sensor device of claim 1 further
comprising a housing defining a form -form factor providing an external shape to said
sensing device that differs from the monolithic structure.

32
Claim *33* (currently amended): The sensing ~~sensor~~ device of claim *32* wherein
said housing is of a non-rigid material.

33
Claim *34* (currently amended): The sensing ~~sensor~~ device of claim *32* wherein
said housing is a plastic material. ~~of plastic~~.

34
Claim *35* (currently amended): The sensing ~~sensor~~ device of claim *32* wherein
said housing comprises a recess providing intimate access to the sensor. ~~is soft~~.

35
Claim *36* (new): The sensing device of claim 1 wherein said sensor is a
capacitive sensor having a fixed electrode and a moveable electrode.